

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0025178

Owner: Metropolitan St. Louis Sewer District (MSD)  
2350 Market Street, St. Louis, MO 63103

Address:

Continuing Authority: Same as above  
Address: Same as above

Facility Name: MSD, Bissell Point WWTP  
Address: 10 East Grand Ave., St. Louis, MO 63147

Legal Description: SE ¼, SE ¼, Sec. 35, T46N, R7E, St. Louis County  
Latitude/Longitude:

Receiving Stream: Mississippi River (P)  
First Classified Stream and ID: Mississippi River (P)(01707)  
USGS Basin & Sub-watershed No.: (07140101 - 070003)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

Outfall #001 – POTW - SIC #4952

Primary clarifiers/trickling filters/activated sludge/sludge thickening, dewatering, incineration, and landfill.

Design population equivalent is 1,500,000.

Design flow is 150 million gallons per day.

Actual flow is 111 million gallons per day.

Design sludge production is 74,369 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

December 30, 2005      January 27, 2006  
Effective Date      Revised Date

  
Doyle Childers, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

December 29, 2010  
Expiration Date  
MO 780-0041 (10-93)

Edward Galbraith, Director of Staff, Clean Water Commission

					PAGE NUMBER 2 of 13	
<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PERMIT NUMBER MO-0025178	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> (Note 1)						
Flow	MGD	*		*	once/day	24 hr. total
Carbonaceous Biochemical Oxygen Demand***	mg/L		40	25	once/weekday	24 hr. comp.
Total Suspended Solids***	mg/L		45	30	once/weekday	24 hr. comp.
Ammonia Nitrogen as N	mg/L	*		*	once/week	grab
pH – Units	SU	**		**	once/weekday	grab
Oil and Grease	mg/L	15		10	once/month	grab
Temperature	°C	*		*	once/weekday	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>February 28, 2006</u> .						
Arsenic, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Cadmium, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Chromium, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Copper, Total Recoverable	µg/L	296		100	once/quarter****	24 hr. comp.
Lead, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Mercury, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Nickel, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Silver, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Zinc, Total Recoverable	µg/L	*		*	once/quarter****	24 hr. comp.
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter****	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter****	24 hr. comp.
Total Phosphorus as P	mg/L	*		*	once/quarter****	24 hr. comp.
Nitrite & Nitrate	mg/L	*		*	once/quarter****	24 hr. comp.
Total Nitrogen as N	mg/L	*		*	once/quarter****	24 hr. comp.
Hardness	mg/L	*		*	once/quarter****	24 hr. comp.
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2006</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>				PAGE NUMBER 3 of 13		
				PERMIT NUMBER MO-0025178		
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Whole Effluent Toxicity (WET) Test (AEC 15.1%)	% Survival	See Special Conditions			twice/year in January & July	24 hr. composite
LC50	%	<50			twice/year in January & July	24 hr. composite
MONITORING REPORTS SHALL BE SUBMITTED <u>SEMI-ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2006</u> .						
<u>Outfall #001</u>						
Total Toxic Organics (Note 2)	mg/L	*			once/year in July	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2006</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

#### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- \* Monitoring requirement only.
- \*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
- \*\*\* This facility is required to meet a removal efficiency of 85% or more.
- \*\*\*\* Once per quarter in the months of January, April, July, and October.

Note 1 - Blue dye #1 shall not exceed 1 mg/L, and the total of Blue #1, Red #3, Red #40, Yellow #5, and Yellow #6 shall not exceed 5mg/L. Substantial complaints due to the plume color or visibility may result in more stringent limits.

Note 2 – See Total Toxic Organics page.

#### C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

C. SPECIAL CONDITIONS (continued)

2. All outfalls must be clearly marked in the field.
3. Report as no-discharge when a discharge does not occur during the report period.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
  - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

4. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
  - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
  - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (5) There shall be no significant human health hazard from incidental contact with the water;
  - (6) There shall be no acute toxicity to livestock or wildlife watering;
  - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

6. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) Permittee is authorized to land apply biosolids, to use biosolids in mine reclamation projects, to compost biosolids, to landfill biosolids, or to use other DNR approved methods for disposal. Permit Standard Conditions, Part III shall apply to the land application of biosolids.

7. All final effluent samples must be taken at a point downstream of where primary effluent bypasses secondary treatment and mixes with secondary effluent. The estimated amount of flow that bypasses secondary treatment, and the dates of all such occurrences, must be reported on the monthly monitoring reports.

C. SPECIAL CONDITIONS (continued)

8. All involved personnel shall be trained in material handling and storage, and housekeeping of maintenance area. Upon request, proof of training shall be submitted to the Department.
9. All paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) shall be stored so that these materials are not exposed to storm water. Spill prevention, control, and/or management shall be provided sufficient to prevent any spills of these pollutants from entering a water of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
10. Good housekeeping practices shall be maintained on the site to keep solid waste from entry into waters of the state.
11. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.
12. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERCLA.
13. Sewer Extension  
The department has approved the construction permit program to regulate and approve construction of sanitary sewers which are tributary to this wastewater treatment plant. This approval may be modified or revoked by the department prior to the sewage collection, transportation, or treatment facilities reach their design limitations, if the facility falls into chronic noncompliance with the permit, or if the permittee fails to follow the terms and conditions of the submitted and approved program.

This permit may be reopened and modified or alternatively revoked and reissued to incorporate new or modified conditions to the sewer construction permit authority, if information indicates changes are necessary to assure compliance with Missouri's Clean Water Law and associated regulations.

When any of the above mentioned conditions occur, the permittee will be notified prior to any modification of this permit condition.

Plans and specifications for all projects which include a proposed bypass must be submitted to the Department to provide record information for location and size of the by-pass.

An annual report on the sewer extension program must be submitted by January 28 of each year to the Missouri Department of Natural Resources St. Louis Regional Office. The report must list the name of the projects approved and the length of sewers and force mains and the capacity of lift stations constructed under the sewer extension program. A summary of total flow at the treatment facility shall be included. Detailed project information and data including design flows and inspection records shall be available for review upon request.

14. An individual shall be designated by the permittee as responsible for environmental matters. Staff of the permitted facility shall inspect, on workdays any structures that function to prevent pollution from storm water or to remove pollutants from storm water and of the facility in general to ensure that any Best Management Practices are continually implemented and effective.

C. SPECIAL CONDITIONS (continued)

15. Nine Minimum Controls

The permittee will implement the Nine Minimum Controls as specified by the U.S. EPA Combined Sewer Overflow (CSO) Policy dated April 19, 1994, (59 FR 18688):

Control 1 – Proper Operation and Maintenance Programs;

Control 2 – Maximum Use of the Collection System for Storage;

Control 3 – Review and Modification of Pretreatment Requirements;

Control 4 – Maximization of Flow to the POTW for Treatment;

Control 5 – Dry Weather Flows from CSO's are prohibited;

Control 6 – Control of Solid and Floatable Materials in CSO's;

Control 7 – Pollution Prevention;

Control 8 – Public Notification;

Control 9 – Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls.

16. The permittee is authorized to discharge from the Combined Sewer Overflow (CSO) outfalls identified in Attachment A. New outfalls may be added by the permittee by applying for modification of the permit.
17. The permittee shall submit to the department a summary report each month on wastes accepted under the Hauled Waste Acceptance Program for the preceding month at each of the designated acceptance points. The report shall identify the source types, volumes, and delivery dates, and shall identify the specific sources of all non-domestic wastes.
18. Permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of 40 CFR Part 403. The approved pretreatment program is hereby incorporated by reference.

Permittee shall submit to the Department on or before September 30 of each year a report briefly describing its pretreatment activities during the previous calendar year. At a minimum, the report shall include the following:

- (a) An updated list of the Permittee's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Permittee shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The Permittee shall also list the Industrial Users that are subject only to local Requirements;
  - (b) A summary of the status of Industrial User compliance over the reporting period;
  - (c) A summary of compliance and enforcement activities (including inspections) conducted by the Permittee during the reporting period; and
  - (d) Any other relevant information requested by the Department.
19. As required in 40 CFR 122.21 (j)(4) the permittee shall, as part of its renewal application for this permit, submit to the department a written technical evaluation of the need to revise local limits under 40 CFR 403.5 (c)(1).

C. SPECIAL CONDITIONS (continued)

20. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	A.E.C. %	FREQUENCY	SAMPLE TYPE	MONTHS
001	15.1	twice/year	24 hr comp.	January and July

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
  - (a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.
  - (b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.
  - (c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.
  - (d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.
  - (e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
  - (f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
  - (g) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
  - (h) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
  - (i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
  - (j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
  - (k) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
  - (l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
  - (m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.

C. SPECIAL CONDITIONS (continued)

- (2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
  - (3) If the effluent fails the test, a multiple dilution test shall be performed within 30 calendar days and biweekly thereafter, until one of the following conditions are met:
    - (a) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
    - (b) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
  - (4) Failure of at least two multiple-dilution tests during any period of accelerated monitoring violates the permit narrative requirement for aquatic life protection.
  - (5) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
  - (6) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
  - (7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
  - (8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
  - (9) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
  - (10) Submit a concise summary in tabular format of all WET test results with the annual report.
- (b) PASS/FAIL procedure and effluent limitations:
- (1) To pass a multiple-dilution test:
    - (a) For facilities with A computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC), OF 30% OR LESS THE AEC must be less than three-tenths (0.3) of the LC<sub>50</sub> concentration for the most sensitive of the test organisms; **OR**,
    - (b) For facilities with an AEC greater than 30% the LC50 concentration must be greater than 100%; **AND**,
    - (c) all effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level;  $p = 0.05$ ) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level;  $p = 0.05$ ) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.



C. SPECIAL CONDITIONS (continued)

(c) Test Conditions

- (1) Test Type: Acute Static non-renewal
- (2) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
- (3) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
- (4) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
- (5) Multiple-dilution tests will be run with:
  - (a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
  - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
  - (c) reconstituted water.
- (6) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
- (7) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

21. This permit allows for blending of the secondary treated effluent with primary treated effluent only when the secondary treatment capacity is exceeded. Permittee shall use the combined primary and secondary treatment capacities in a way that maximizes treatment. This approval does not relieve the permittee from meeting 85% removal for BOD and TSS. In addition, the permittee should continue to implement and refine a program that maximizes the capacity, management, operation, and maintenance (CMOM) of the collection system to assure the system is operated in a way that minimizes peak flows during wet weather events.

D. SCHEDULE OF COMPLIANCE

1. The permittee shall submit a revised Long Term Control Plan (LTCP) consistent with the U.S. EPA CSO Policy dated April 19, 1994, (59 FR 18688) by August 17, 2006.
2. The permittee shall submit annual reports to document implementation of the Nine Minimum Controls. The reports will be due November 30 of each year.

C. SPECIAL CONDITIONS (continued)

SUMMARY OF TEST METHODOLOGY FOR WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$ )
Test acceptability criterion:	90% or greater survival in controls

Test conditions for Pimephales promelas:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$ )
Test Acceptability criterion:	90% or greater survival in controls

C. SPECIAL CONDITIONS (continued)

Note 2 - Total Toxic Organics

Acenaphthene	4-chlorophenyl phenyl ether
Acrolein	4-bromophenyl phenyl ether
Acrylonitrile	Bis (2-chloroisopropyl) ether
Benzene	Bis (2-chloroethoxy) methane
Benzidine	Methylene Chloride (dichloromethane)
Carbon Tetrachloride (tetrachloromethane)	Methyl Chloride (chloromethane)
Chlorobenzene	Methyl bromide (bromomethane)
1,2,4-trichlorobenzene	Bromoform (tribromomethane)
Hexachlorobenzene	Dichlorobromomethane
1,2-dichloroethane	Chlorodibromomethane
1,1,1-trichloroethane	Hexachlorobutadiene
Hexachloroethane	Hexachlorocyclopentadiene
1,1-dichloroethane	Isophorone
1,1,2-trichloroethane	Naphthalene
1,1,2,2-tetrachloroethane	Nitrobenzene
Chloroethane	2-nitrophenol
Bis (2-chloroethyl) ether	4-nitrophenol
2-chloroethyl vinyl ether	2,4-dinitrophenol
N-nitrosodi-n-propylamine	4,6-dinitro-o-cresol
Pentachlorophenol	N-nitrosodimethylamine
Phenol	N-nitrosodiphenylamine
Bis (2-ethylhexyl) phthalate	Phenanthrene
Butyl benzyl phthalate	1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)
Di-n-butyl phthalate	Indeno (1,2,3-cd) pyrene
	(2,3-o-phenylene pyrene)
Di-n-octyl phthalate	Pyrene
Diethyl phthalate	Tetrachloroethylene
Dimethyl phthalate	Toluene
1,2-benzanthracene (benzo(a)anthracene)	Trichloroethylene
Benzo(a)pyrene (3,4-benzopyrene)	Vinyl Chloride (chloroethylene)
3,4-benzofluoranthene (benzo(b)fluoranthene)	Aldrin
11,12-benzofluoranthene (benzo(k)fluoranthene)	Dieldrin
Chrysene	Chlordane (technical mixture and metabolites)
Anthracene	4,4-DDT
1,12-benzoperylene (benzo(ghi)perylene)	4,4-DDE (p,p-DDX)
Fluorene	4,4-DDD (p,p-TDE)
2-chloronaphthalene	Alpha-endosulfan
2,4,6-trichlorophenol	Beta-endosulfan
Parachlorometa cresol	Endosulfan sulfate
Chloroform (trichloromethane)	Endrin
2-chlorophenol	Endrin aldehyde
1,2-dichlorobenzene	Heptachlor
1,3-dichlorobenzene	Heptachlor epoxide (BHC hexachlorocyclohexane)
1,4-dichlorobenzene	Alpha-BHC
3,3-dichlorobenzidine	Beta-BHC
1,1-dichloroethylene	Gamma-BHC
1,2-trans-dichloroethylene	Delta-BHC (PCB polychlorinated biphenyls)
2,4-dichlorophenol	PCB-1242 (Arochlor 1242)
1,2-dichloropropane (1,3-dichloropropane)	PCB-1254 (Arochlor 1254)
2,4-dimethylphenol	PCB-1221 (Arochlor 1221)
2,4-dinitrotoluene	PCB-1232 (Arochlor 1232)
2,6-dinitrotoluene	PCB-1248 (Arochlor 1248)
1,2-diphenylhydrazine	PCB-1260 (Arochlor 1260)
Ethylbenzene	PCB-1016 (Arochlor 1016)
Fluoranthene	Toxaphene

ATTACHMENT A

**CSO OUTFALL LOCATIONS**

<b><u>Outfall</u></b>	<b><u>Size (W x H)</u></b>	<b><u>Receiving Water</u></b>	<b><u>Elevation</u></b>	<b><u>Longitude</u></b>	<b><u>Latitude</u></b>
002	65 x 63 inch	Mississippi River	392.10	90° 13' 32"	38° 34' 36"
003	126 x 126 inch arch	Mississippi River	388.58	90° 13' 22"	38° 34' 44"
004	132 inch	Mississippi River	387.53	90° 12' 49"	38° 35' 5"
005	72-inch	Mississippi River	383.65	90° 12' 28"	38° 35' 19"
006	96 x 108 inch	Mississippi River	387.46	90° 12' 19"	38° 35' 25"
007	90 inch	Mississippi River	391.15	90° 12' 0"	38° 35' 41"
008	102 inch	Mississippi River	389.92	90° 11' 52"	38° 35' 50"
009	60 inch	Mississippi River	387.49	90° 11' 45"	38° 35' 58"
010	72 x 90 inch arch	Mississippi River	385.85	90° 11' 40"	38° 36' 6"
011	66 inch	Mississippi River	386.02	90° 11' 35"	38° 36' 13"
012	108 inch	Mississippi River	390.05	90° 11' 30"	38° 36' 23"
013	46 x 61 inch	Mississippi River	389.90	90° 11' 30"	38° 36' 23"
014	174 inch	Mississippi River	379.71	90° 11' 23"	38° 36' 33"
015	198 x 198 inch	Mississippi River	388.42	90° 11' 19"	38° 36' 42"
016	324 inch wide open channel	Mississippi River	386.26	90° 11' 15"	38° 36' 49"
017	36 inch	Mississippi River	390.63	90° 11' 11"	38° 36' 59"
018	30 inch	Mississippi River	391.72	90° 11' 11"	38° 37' 1"
019	72 x 60 inch	Mississippi River	378.57	90° 11' 7"	38° 37' 8"
020	60 x 60 inch	Mississippi River	383.88	90° 11' 2"	38° 37' 20"
021	30 inch	Mississippi River	389.93	90° 10' 54"	38° 37' 46"
022	36 inch	Mississippi River	390.13	90° 10' 53"	38° 37' 49"
023	30 inch	Mississippi River	390.15	90° 10' 53"	38° 37' 52"
024	30 inch	Mississippi River	398.02	90° 10' 53"	38° 37' 59"
025	30 inch	Mississippi River	386.13	90° 10' 51"	38° 38' 2"
026	36 inch	Mississippi River	386.30	90° 10' 51"	38° 38' 2"
027	60 x 96 inch	Mississippi River	381.18	90° 10' 51"	38° 38' 7"
028	30 inch	Mississippi River	386.60	90° 10' 50"	38° 38' 15"
029	38 x 48 inch	Mississippi River	386.32	90° 10' 50"	38° 38' 15"
030	30 x 40 inch	Mississippi River	390.64	90° 10' 51"	38° 38' 18"
031	60 inch	Mississippi River	385.36	90° 10' 51"	38° 38' 26"
032	36 inch	Mississippi River	388.70	90° 10' 54"	38° 38' 40"
033	48 x 60 inch	Mississippi River	384.81	90° 10' 55"	38° 38' 55"
034	66 inch	Mississippi River	390.45	90° 10' 56"	38° 38' 55"
035	84 inch	Mississippi River	390.87	90° 10' 58"	38° 39' 7"
036	60 inch	Mississippi River	390.74	90° 10' 58"	38° 39' 7"
037	216 x 168 inch H.S.	Mississippi River	391.02	90° 11' 3"	38° 39' 26"
038	168 x 132 inch H.S.	Mississippi River	386.31	90° 11' 3"	38° 39' 29"
041	90 inch	Mississippi River	384.18	90° 11' 12"	38° 39' 55"
042	60 inch	Mississippi River	384.96	90° 11' 15"	38° 40' 2"
043	96 x 120 inch Arch	Mississippi River	387.16	90° 11' 22"	38° 40' 27"
044	78 inch	Mississippi River	389.14	90° 11' 22"	38° 40' 27"
045	66 inch	Mississippi River	395.46	90° 11' 42"	38° 40' 55"
046	96 inch	Mississippi River	392.30	90° 11' 42"	38° 40' 54"
047	two 180 x 156 inch boxes	Mississippi River	387.46	90° 12' 19"	38° 35' 25"
048	120 x 102 inch H.S.	Mississippi River	392.36	90° 12' 50"	38° 42' 9"
049	three 108 x 192 inch boxes trans. to 39-ft channel	Mississippi River	391.31	90° 12' 57"	38° 42' 30"
050	60 inch	Mississippi River	395.87	90° 12' 58"	38° 43' 18"
051	376 inch wide open channel	Maline Creek	400.32	90° 13' 16"	38° 43' 45"
052	42 and 60 inch	Maline Creek	389.50	90° 13' 2"	38° 43' 39"
053	42 inch	Maline Creek	389.50	90° 13' 3"	38° 43' 39"

**ATTACHMENT A**

**CSO OUTFALL LOCATIONS**

<b><u>Outfall</u></b>	<b><u>Size (W x H)</u></b>	<b><u>Receiving Water</u></b>	<b><u>Elevation</u></b>	<b><u>Longitude</u></b>	<b><u>Latitude</u></b>
055	24 inch	Mississippi River	400.00	90° 10' 53"	38° 45' 34"
057	36 inch	Mississippi River	392.27	90° 13' 28"	38° 34' 40"
059	66 inch	Gingras Creek	562.50	90° 17' 36"	38° 42' 54"
060	24 inch	Maline Creek	407.30	90° 13' 18"	38° 43' 47"
061	121 x 132 inch	Mississippi River	381.18	90° 10' 51"	38° 38' 7"